

ABSTRACT

The present disclosure relates to the identification phage lysin from group B streptococci (GBS). The nucleic acid sequence and amino acid sequence of the GBS phage lysin is disclosed. The GBS phage lysin is a bifunctional protein comprising a glucosidase and an endopeptidase activity. The endopeptidase present in the GBS phage lysis has a substrate specificity that has not been previously reported. The bifunctional GBS phage lysin is effective against groups A, B, C, E and G streptococci. Also described are methods of using the GBS phage lysin for the prevention and treatment of bacterial infections.